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NOTICE OF ALLOWANCE AND FEE(S) DUE

30652

7590

12/29/2009

CONLEY ROSE, P.C.
5601 GRANITE PARKWAY, SUITE 750
PLANO, TX 75024

EXAMINER

WOOD, JR, STEVEN A

ART UNIT

PAPER NUMBER

2462

DATE MAILED: 12/29/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,886	02/15/2008	Chenglong Liu	4202-02500	1547

TITLE OF INVENTION: METHOD FOR REAL-TIME SYNCHRONIZING CONFIGURATION DATA BETWEEN ELEMENT MANAGEMENT SYSTEMS AND NETWORK ELEMENTS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/29/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

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30652 7590 12/29/2009
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(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,886 02/15/2008 Chenglong Liu 4202-02500 1547

TITLE OF INVENTION: METHOD FOR REAL-TIME SYNCHRONIZING CONFIGURATION DATA BETWEEN ELEMENT MANAGEMENT SYSTEMS AND NETWORK ELEMENTS

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	03/29/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
WOOD, JR, STEVEN A	2462	370-503000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

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This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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			ART UNIT	PAPER NUMBER

2462

DATE MAILED: 12/29/2009

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 91 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 91 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability**Application No.**

10/586,886

Applicant(s)

LIU, CHENGLONG

Examiner

STEVEN WOOD

Art Unit

2462

- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant requested reconsideration 08/20/2009 & authorized examiner's amendment 12/16/2009.
2. ☒ The allowed claim(s) is/are 1,3,4 and 8-22.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Donald L Mills/
Primary Examiner, Art Unit 2462

DETAILED ACTION

EXAMINER'S AMENDMENT

1. This action is in response to the request for reconsideration of Patent Application No. **10/586886**, filed **08/20/2009**. This action also responds to Applicant's authorization for Examiner's amendment, on **12/16/2009**.

2. An Examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Grant Rodolph (Reg No. 40,487) on 12/16/2009.

The application has been amended as follows:

Claims:

3. 1. (Currently Amended) A method for synchronizing configuration data between an Element Management System (EMS) and a Network Element (NE), wherein the configuration data of the NE is divided into a plurality of layers such that different layers comprise different configuration data sets of minimum units, and wherein a minimum unit identifier word is provided for each layer to identify any changes to the configuration data in the layer, the method comprising:

if the configuration data of the NE is changed, the NE changing the minimum unit identifier word of the layer corresponding to the changed configuration data;

the EMS obtaining the changed minimum unit identifier word from the NE; and

the EMS comparing the obtained minimum unit identifier word with a minimum unit identifier word stored in the EMS to determine which layer is associated with the changed configuration data; and

the EMS synchronizing the changed configuration data of corresponding NE with the EMS;

wherein the minimum unit identifier word comprises:

a sequence number identifier word that identifies a minimum configuration unit item with a sequence number;

a network management table identifier word that is a configuration word and comprises configuration tables of all the network management devices supported by the NE;

a mixed identifier word;

or any combination thereof;

wherein the mixed identifier word comprises a configuration device identifier, a changing time identifier, a configuration item identifier, or any combination thereof.

4. 2. (Cancelled).

5. 3. (Previously Presented) The method, according to claim 1, wherein the layers comprise an NE configuration data layer, a service configuration data layer, and a table configuration data layer; and

Wherein the NE configuration data layer represents the collection of all the data of the NE, the configuration data of the NE is divided into the service configuration data layer according to a service characteristic, and the table configuration data layer is determined on the basis of service characteristic classification.

6. 4. (Original) The method according to claim 3, further comprising:

dividing the configuration data in the table configuration data layer into row content layers.

7. 5 – 7. (Cancelled).

8. 8. (Previously Presented) The method according to claim 1, wherein the step of changing the minimum unit identifier word of the configuration data layer corresponding to the changed configuration data comprises:

- determining which layer is associated with the changed configuration data;
- modifying the minimum unit identifier word of the layer associated with the changed configuration data and any higher layers.

9. 9. (Previously Presented) The method according to claim 1, further comprising:

- determining which EMS has changed the configuration data of the NE;
- setting an operation user identifier word corresponding to the EMS that changed the configuration data;
- the EMS obtaining the operation user identifier word from the NE; and
- the EMS comparing the received operation user identifier word with the operation user identifier word stored in the EMS to judge whether it is the EMS that has changed the configuration data, and if not, executing the step of synchronizing the configuration data.

10. 10. (Previously Presented) The method according to claim 9, wherein the minimum unit identifier word assigned for each configuration data layer further comprises the operation user identifier word;

- if the configuration data of the NE is changed, the NE determining which layer is associated with the changed configuration data;

modifying the minimum unit identifier words of the layer associated with the changed configuration data and any higher layers; and

modifying the operation user identifier words comprised in the minimum unit identifier words.

11. 11. (Previously Presented) The method according to claim 1, wherein the NE is in communication with a plurality of EMSs, wherein the NE sends a configuration changed event notification to the EMSs, and wherein the configuration changed event notification comprises the changed minimum unit identifier word.

12. 12. (Previously Presented) The method according to claim 11, wherein the step of the NE sending configuration changed event notification to the EMSs comprises:

the NE postponing sending the configuration changed event notification to the EMSs for a predefined period of time; and

if the configuration is changed again during the predefined time, the NE will not send the configuration changed event notification until at least one new change is finished.

13. 13. (Previously Presented) The method according to claim 11, wherein the step of the NE sending the configuration changed event notification to the EMSs comprises:

if the NE continuously receives configuration commands from multiple different EMSs or a batch processing configuration commands from a single EMS, the NE will not send the

configuration changed event notification to the EMSs until all the corresponding configurations are finished.

14. 14. (Previously Presented) The method according to claim 1, wherein the EMS actively queries the NE for the minimum unit identifier word.

15. 15. (Previously Presented) The method according to claim 1, wherein the EMS compares the obtained minimum unit identifier word with a minimum unit identifier word stored in the EMS to determine which layer is associated with the changed configuration data, and wherein the configuration data changes comprises:

the EMS comparing the obtained minimum unit identifier word with the minimum unit identifier word stored in the EMS;

if the obtained minimum unit identifier word and the minimum unit identifier word stored in the EMS are not identical, determining that the configuration data of the layer corresponding to the minimum unit identifier word is changed, and the configuration data changes according to a change detail of the minimum unit identifier word.

16. 16. (Currently Amended) The method according to claim 1, wherein the step of the EMS synchronizing the changed configuration data of the corresponding NE comprises:

the EMS comparing the changed configuration data with that stored in a history record of the EMS to determine the changes of the configuration data, and then synchronizing the configuration data according to the changes of the configuration data of the NE.

17. 17. (Previously Presented) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

the EMS synchronizing the configuration data at a specified time.

18. 18. (Previously Presented) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

the EMS synchronizing the configuration data immediately in response to receiving the changed minimum unit identifier word and an operation user identifier word.

19. 19. (Previously Presented) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

after receiving the changed minimum unit identifier word and an operation user identifier word, the EMS delaying a predefined period of time before synchronizing the configuration data.

20. 20. (Previously Presented) The method according to claim 16, wherein the step of synchronizing the configuration data by the EMS according to the changes of the configuration data of the NE comprises:

setting a manual synchronization command;

and the EMS synchronizing the configuration data according to the manual synchronization command.

21. 21. (Currently Amended) A method comprising:

determining whether a configuration data within a network element (NE) comprises a change, wherein the configuration data is divided into a plurality of layers, and wherein each layer is associated with one of a first plurality of words that each identify any changes to the associated layer;

determining which EMS has changed the configuration data of the NE;

setting an operation user identifier word corresponding to the EMS that changed the configuration data, wherein the first words comprise the operation user identifier word;

if the configuration data of the NE is changed, the NE determining which layer is associated with the changed configuration data;

changing the first words associated with the layers that comprise the change when the configuration data comprises a change;

changing the operation user identifier words comprised in the first words;

sending the first words but not the change to an Element Management System (EMS),
~~wherein the EMS compares the first words to a plurality of second words and initiates a~~
~~synchronization process when the first words do not match the second words~~ wherein the EMS
compares the first words to a plurality of second words to judge whether the EMS that has
changed the configuration data, and if not, initiates a synchronization process.

22. 22. (Previously Presented) The method according to claim 1, wherein the minimum unit identifier word represents the changed configuration data but does not comprise the changed configuration data.

Allowable Subject Matter

23. **Claims 17 – 19, 21 – 27, 30 – 32** are allowed.

24. This communication warrants No Examiner's Reason for Allowance, applicant's reply make evident the reasons for allowance, satisfying the "record as a whole" proviso of the rule 37 CFR 1.104(e). Specifically, the substance of applicant's arguments filed on 09/28/2009 are persuasive, as such the reasons for allowance are in all probability evident from the record and no statement is deemed necessary (see MPEP 1302.14).

25. Any comments Applicants considers necessary must be submitted no later than the payment of the Issue Fee and to avoid processing delays, should preferably accompany the Issue Fees. Such submission should be clearly labeled "Comments on Statement of Reasons for Allowance." In event of any post-allowance papers (e.g. IDS, 312 amendment, petition, etc.), Applicant is exhorted to mail papers to the Production Control branch in Publications or faxed to post-allowance papers correspondence branch at (703) 308-5864 to expedite issuing process or call PUB's Customer Service if any questions at (703) 305-8497.

Conclusion

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Wood whose telephone number is (571) 270-7318. The examiner can normally be reached on Monday to Friday 8:00 AM to 4:00 PM.

If attempts to reach the above noted Examiner by telephone are unsuccessful, the Examiner's supervisor, Seema Rao, can be reached at the following telephone number: (571) 272-3174.

The fax phone number for the organization where this application or proceeding is assigned is 571-270-8318. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/S.W./
December 16, 2009
Steven A. Wood
Examiner
Art Unit 2462

/Donald L. Mills/
Primary Examiner, Art Unit 2462